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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,744

03/20/2006

Satoshi Moriya

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5504

22893

7590

11/24/2009

SMITH PATENT OFFICE  
1901 PENNSYLVANIA AVENUE N W  
SUITE 901  
WASHINGTON, DC 20006

EXAMINER

LEE, KYUNG S

ART UNIT

PAPER NUMBER

2833

MAIL DATE

DELIVERY MODE

11/24/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/538,744

**Applicant(s)**

MORIYA, SATOSHI

**Examiner**

Kyung Lee

**Art Unit**

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date 09/16/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Claims 1-11 in the reply filed on 9/16/09 is acknowledged.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al., JP 11-288801 [IDS] in view of Wenschot, US Pat. 5,098,654 and in further view of Masumoto [JP 61-119637 IDS, abstract].
4. Nomura teaches a resistive material comprising of copper and nickel powder in the amount of 75-90 weight %, glass powder in the amount of 3-20 weight % and copper oxide powder in the amount of 1-10 weight %, all mixed in a resin vehicle/binder [abstract, mid-page] for the purpose controlling the resistance value and the temperature coefficient resistance of the resistive material. Nomura teaches the claimed invention except for adding in additional metals to the resistive material.
5. Wenschot teaches a resistive material comprising Mn at 11-25%, Al at 5-8%, Fe at 0.5-3%, Ni at 2-6%, Ti at 0.5-2%, Zn at 0-5% and the rest percentage being Cu [col. 1, lines 48-52]. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added in the additional resistive material of Wenschot with the glass powder and vehicle [binder]

of Nomura, since the mixed composition allows for adjustment to the resistance value and to the temperature coefficient resistance to the resistive material of Nomura as needed.

6. Regarding the “resistive material” of Wenschot, Masumoto et al. teaches that material containing Mn-Al-Cu is resistive.

Regarding claim 3, Nomura teaches the glass powder at 3-20 weight %.

Regarding claim 4, Nomura teaches a resistive material comprised of copper and nickel powder in the amount of 75-90 weight %, glass powder in the amount of 3-20 weight % and copper oxide powder in the amount of 1-10 weight %. This allows for 10-15% for the resin.

Regarding claims 5-9, Wenschot, Nomura and Masumoto teach the claimed invention except for specifying that the metallic powder being made by mixing copper powder, manganese powder, and aluminum powder [for claim 5], copper-manganese-aluminum alloy powder [claim 6], etc. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a combination of resistive and/or conductive powder [such as copper manganese, nickel, titanium, aluminum] mixed in a binder for the purpose of controlling resistivity, resistance value and/or TCR since the examiner takes Official Notice of the equivalence for their use in the resistor manufacturing art and the selection of any of these known equivalents to be within the level of ordinary skill in the art.

Regarding claims 10-11, Wenschot in view of Nomura and in further in view of Masumoto teach the resistive material as claimed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung Lee whose telephone number is (571)272-1994. The examiner can normally be reached on Mon to Thur from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571)272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kyung Lee/  
Primary Examiner, Art Unit 2833